Sherritt Gordon Mines Limited
Fertilizer Research in Saskatchewan
Presented to Saskatchewan Soil Fertility Workshop
February 6 - 7, 1974
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Sherritt Gordon Mines have conducted fertilizer research plots in Saskatchewan since 1968. This report deals with the highlights of the 1973 plots and summarizes the results obtained to date. Neepawa wheat and Conquest barley response to nitrogen and phosphorus at Delmas is given in Table 1 and 2 respectively. Response of wheat to nitrogen and phosphorus was considerably less than anticipated according to the predicted yield increase of the soil testing laboratory. Barley response to Nitrogen was as predicted however, response to phosphorus was small and not related to the suggested predicted yield increase.

Barley response to nitrogen at Glaslyn was higher than the expected yield increase while response to phosphorus was somewhat below the anticipated.

The response of barley to nitrogen at Mackwa given in Table 4 was considerably lower than the expected yield increase at the 30 and 60 pound N rate but was equal to the 90 pound N rate. Phosphorus response was higher than expected. Profitable responses were obtained to potassium additions.

A summary of barley and rapeseed response to nitrogen in Saskatchewan is given in Table 5 and 6 respectively and has been restricted to sites in which a complete set of nutrient rates were used. Similar yield results were obtained when all sites were included (14 sites). Most of these trials were located in the northern half of Saskatchewan on stubble fields with low levels of available nitrogen. Barley and rapeseed responded to nitrogen up to 240 pounds of N and in determining the maximum recommended level of N application under present economic conditions, 120 pounds of N could be recommended for barley and 180 pounds of N for rapeseed. These levels are considerably higher than that being recommended by the soil testing laboratory and in fact used by any farmer. The summary of barley response to phosphorus is given in Table 7 and for rapeseed in Table 8. In both cases there does not appear to be any economic justification in fertilizing beyond the 30 pound P_2O_5 level.

Fertilizer plots on forages by Sherritt Gordon have been limited in Saskatchewan. The yield response and economics of fertilizer use on an alfalfa stand on Gerry Chevrier's farm at Arborfield Sask. in 1972 and 1973 is given in Table 9. The price of hay and costs of fertilizer used to determine the economics of fertilizer use is given at the bottom of the table. Two cuts of alfalfa were taken in both years. Treatments # 4, 7, 10, 13, 16, and 19 did not have a fall 1972 fertilizer applied so that residual response to the fertilizer applied in the fall of 1971 could be measured in 1973.

Table 1

Sherritt Gordon Mines Limited
Research and Development Division

1973 Fertilizer Plot Plot at Delmas.

Seed: Neepawa Wheat Response to Nitrogen, Phosphorus & Sulphur Fert

Location: Blais Bros. Delmas, Saskatchewan

Soil Zone: Dark Grey Soil Type: Fine Sandy Loam

Topography: Slight slope Drainage: Good

Depth (inches): 0-6; 6-12; 12-24"; 0-6", 0-6";

Soil Analysis: (Pounds per acre) N 8 - 6 - 7 P 14 K 557

Cropping History: 1972 Rapeseed

Date of Seeding: 15 May Rate of Seeding: 1 bus/acre Harvested: 20 Aug

Moisture: Dry at the surface Total Rainfall: 7.24 inches

Herbicide: 1 pt/A. Buctril "M" on 11 June; 6 oz/A. Carbyne on 5 June

YIELD RESULTS

Value of Crop: Wheat valued at $3.50 per bushel

Check Yield: 9.6 bushels per acre

Response to Nitrogen (N)

Pounds "N" (1) Applied	Cost of "N" (2) ($)	Yield Bushels/Acre	Yield Increase Bushels	Profit Due to "N" ($)
0	0.00	11.9	-	0.00
30	3.93	14.1	2.2	3.77
60	7.86	18.1	6.2	13.84
90	11.79	18.8	6.9	12.36
120	15.72	24.7	12.8	29.08
180	23.58	23.8	11.9	18.07
240	31.44	19.8	7.9	-3.79

(1) All treatments had 45 lb P_2O_5 per acre
(2) Cost of "N" 13.1¢ per lb. 21-0-0 @ $55.00/ton

Response to Phosphorus (P_2O_5)

Pounds "P_2O_5" (1) Applied	Cost of "P_2O_5" (2) ($)	Yield Bushels/Acre	Yield Increase Bushels	Profit Due to "P_2O_5" ($)
0	0.00	16.5	-	0.00
10	1.18	18.5	2.0	5.82
15	1.77	19.6	3.1	9.08
20	2.36	18.9	2.4	6.04
25	2.95	19.4	2.9	7.20
30	3.54	18.8	2.3	4.51
45	5.31	18.8	2.3	2.74
60	7.08	21.1	4.6	9.02

(1) All treatments had 90 lb of "N" per acre
(2) Cost of "P_2O_5" 11.8¢ lb. 11-55-0 @ $130.00/ton

Table 2

Sherritt Gordon Mines Limited
Research and Development Division

1973 Fertilizer Plot Data at Delmas.

Seed: Conquest Barley Response to Nitrogen, Phosphorus & Sulphur Fert.

Location: Blais Bros. Delmas, Saskatchewan

Soil Zone: Dark Grey Soil Type: Fine Sandy Loam

Topography: Slight Slope Drainage: Good

Depth (inches): 0-6; 6-12; 12-24"; 0-6", 0-6";

Soil Analysis: (Pounds per acre) N 8 - 6 - 7 P 14 K 557

Cropping History: 1972 Rapeseed

Date of Seeding: 15 May Rate of Seeding: 1½ bus/acre Harvested: 20 Aug

Moisture: Dry on the surface Total Rainfall: 7.24 inches

Herbicide: 1½ qts/A. Avadex before seeding; 1 pt/A. Buctril "M" on 11 June

YIELD RESULTS

Value of Crop: Barley valued at $2.00

Check Yield: 24.7 bushels per acre

Response to Nitrogen (N)

Pounds "N" (1) Applied	Cost of "N" (2) ($)	Yield Bushels/Acre	Yield Increase Bushels	Profit Due to "N" ($)
0	0.00	28.0	-	0.00
30	3.93	39.7	11.7	19.47
60	7.86	48.9	20.9	33.94
90	11.79	52.2	24.2	36.61
120	15.72	51.9	23.9	32.08
180	23.58	60.2	32.2	40.82
240	31.44	69.0	41.0	50.56

(1) All treatments had 45 lb P_2O_5 per acre
(2) Cost of "N" 13.1¢ per lb. 21-0-0 @ $55.00/ton

Response to Phosphorus (P_2O_5)

Pounds "P_2O_5" (1) Applied	Cost of "P_2O_5" (2) ($)	Yield Bushels/Acre	Yield Increase Bushels	Profit Due to "P_2O_5" ($)
0	0.00	52.3	-	0.00
10	1.18	54.7	2.4	3.62
15	1.77	51.2	-1.1	- 3.97
20	2.36	54.4	2.1	1.84
25	2.95	54.0	1.7	0.45
30	3.54	51.3	-1.0	- 5.54
45	5.31	52.2	-0.1	- 5.51
60	7.08	50.8	-1.5	-10.08

(1) All treatments had 90 lb of "N" per acre
(2) Cost of "P_2O_5" 11.8¢ lb. 11-55-0 @ $130.00/ton

Table 3

Sherritt Gordon Mines Limited
Research and Development Division

1973 Fertilizer Plot Data at Glaslyn

Seed: Conquest Barley Response to Nitrogen, Phosphorus & Sulphur Fert.

Location: Harry Zubiak, Glaslyn, Saskatchewan

Soil Zone: Dark Grey Wooded Soil Type: Fine Sandy Loam

Topography: Flat Drainage: Poor

Depth (inches) 0-6; 6-12; 12-24"; 0-6", 0-6";

Soil Analysis: (Pounds per acre) N 9 - 4 - 4 P 18 K 187

Cropping History: 1972 Barley, 1971 Fallow

Date of Seeding: 16 May Rate of Seeding: 1½ bus/acre Harvested: 21 Aug

Moisture: Good at time of seeding Total Rainfall: 7.0 inches

Herbicide: 1½ qts/A. Avadex before seeding; 1 pt/A. Buctril "M" on 12 June

YIELD RESULTS

Value of Crop: Barley valued at $2.00 per bushel

Check Yield: 31.9 bushels per acre.

Response to Nitrogen (N)

Pounds "N" (1) Applied	Cost of "N" (2) ($)	Yield Bushels/Acre	Yield Increase Bushels	Profit Due to ($)
0	0.00	25.6	-	0.00
30	3.93	42.2	16.6	29.27
60	7.86	50.1	24.5	41.14
90	11.79	62.0	36.4	61.01
120	15.72	65.9	40.3	64.88
180	23.58	67.9	42.3	61.02
240	31.44	62.9	37.3	43.16

(1) All treatments had 45 lb P_2O_5 per acre
(2) Cost of "N" 13.1¢ per lb. 21-0-0 @ $55.00/ton

Response to Phosphorus (P_2O_5)

Pounds "P_2O_5" (1) Applied	Cost of "P_2O_5" (2) ($)	Yield Bushels/Acre	Yield Increase Bushels	Profit Due to "I ($)
0	0.00	57.8	-	0.00
10	1.18	62.5	4.7	8:22
15	1.77	66.9	9.1	16.43
20	2.36	62.0	4.2	6.04
25	2.95	63.5	5.7	8.45
30	3.54	63.3	5.5	7.46
45	5.31	62.0	4.2	3.09
60	7.08	61.1	3.3	-0.48

(1) All treatments had 90 lb of "N" per acre
(2) Cost of "P_2O_5" 11.8¢ lb. 11-55-0 @ $130.00/ton

Table 4

Sherritt Gordon Mines Limited
Research and Development Division

1973 Fertilizer Plot Data at Mackwa

Seed: Conquest Barley Response to Nitrogen, Phosphorus, Potassium & Sulphur Fert.

Location: Ted Kurjata Mackwa, Saskatchewan

Soil Zone: _____ Soil Type: Fine Sandy Loam

Topography: Flat Drainage: Poor

Depth (inches) 0-6; 6-12; 12-24"; 0-6", 0-6";

Soil Analysis: (Pounds per acre) N 8 - 4 - 9 P 20 K 190

Cropping History: 1972 Rapeseed; 1971 Fallow

Date of Seeding: 17 May Rate of Seeding: 1½ bus/acre Harvested: 21 Aug

Moisture: Wet at time of seeding Total Rainfall: 9.52 inches

Herbicide: 1½ qts/A. Avadex before seeding; 1 pt/A Buctril "M" on 12 June

YIELD RESULTS

Value of Crop: Barley Valued at $2.00 per bushel

Check Yield: 30.0 Bushels per acre

Response to Nitrogen (N)

Pounds "N" (1) Applied	Cost of "N" (2) ($)	Yield Bushels/Acre	Yield Increase Bushels	Profit Due to "N" ($)
0	0.00	39.3	-	0.00
30	3.93	44.2	4.9	5.87
60	7.86	46.1	6.8	5.74
90	11.79	59.0	19.7	27.61
120	15.72	51.0	11.7	7.68
180	23.58	68.8	29.5	35.42
240	31.44	93.4	54.1	76.76

(1) All treatments had 45 lb P_2O_5 per acre
(2) Cost of "N" 13.1¢ per lb. 21-0-0 @ $55.00/ton

Response to Phosphorus (P_2O_5)

Pounds "P_2O_5" (1) Applied	Cost of "P_2O_5" (2) ($)	Yield Bushels/Acre	Yield Increase Bushels	Profit Due to "P_2O_5" ($)
0	0.00	39.8	-	0.00
10	1.18	43.9	4.1	7.02
15	1.77	52.5	12.7	23.63
20	2.36	59.6	19.8	37.24
25	2.95	55.5	15.7	28.45
30	3.54	58.6	18.8	34.06
45	5.31	59.0	19.2	33.09
60	7.08	56.3	16.5	25.92

(1) All treatments had 90 lb of "N" per acre
(2) Cost of "P_2O_5" 11.8¢ lb. 11-55-0 @ $130.00/ton

Response to Potassium (K_2O)

Pounds "K_2O" (1) Applied	Cost of "K_2O" (2) ($)	Yield Bushels/Acre	Yield Increase Bushels	Profit Due to "K_2O" ($)
0	0.00	59.0	-	0.00
15D	0.75	69.9	10.9	21.05
30D	1.50	71.0	12.0	22.50
30B	1.50	74.9	15.9	30.30
60B	3.00	69.2	10.2	17.40
90B	4.50	75.9	16.9	29.30

(1) All Treatments had 90 lb N & 45 lbs P_2O_5 per acre. "D" is for drilled "B" is for broadcast
(2) Cost of "K_2O" 0.25¢ per lb. 0-0-60 @ $50 per ton

Table 5 Response of Conquest Barley to Nitrogen in Saskatchewan 1972 - 1973 (5 sites)

Check Yield 27.5 Bushels

Yield with P_2O_5 (45 lbs) 32.1 Bushels

Cost of Nitrogen (N) - 13.1¢ per lb.

Barley valued at $2.00 per bushel

N	Cost	Yield Bus. Per. acre	Increased Yld. "N" yield - "P" yield	Profits from Nitrogen	Returns fo each dolla invested Nitrogen
30	$ 3.93	43.1	11.0	$ 18.07	$ 5.60
60	$ 7.86	52.1	20.0	$ 32.14	$ 4.58
90	$ 11.79	59.6	27.5	$ 43.21	$ 3.82
120	$ 15.72	62.7	30.6	$ 45.48	$ 1.58
180	$ 23.58	67.6	35.5	$ 47.42	$ 1.25
240	$ 31.44	69.6	37.5	$ 43.56	$ 0.50

Table 6 Response of Rapeseed to Nitrogen In Sask.
1970 - 1972 (5 sites)

Check Yield 8.6 bushels
Yield with P_2O_5 (45 lbs) 12.3 bushels
Cost of Nitrogen (N) -13.1¢ per lb.
Rapeseed Valued at $4.75 per bus.

N	Cost	Yield bus. per. acre	Increased Yld. "N"yield - "P" yield	Profits from Nitrogen	Returns for each dollar invested in Nitrogen
30	$ 3.93	16.7	4.4	$ 16.97	$ 5.32
60	$ 7.86	20.5	8.2	$ 31.09	$ 4.59
90	$ 11.79	23.8	11.5	$ 42.84	$ 3.99
120	$ 15.72	26.2	13.9	$ 50.31	$ 2.90
180	$ 23.58	28.8	16.5	$ 54.80	$ 1.57
240	$ 31.44	30.3	18.0	$ 54.06	$ 0.90

Table 7 Response of Conquest Barley to Phosphorus in Sask. 1972 - 1973 (5 sites)

Check yield 27.5 bushels

Yield with 90 lbs "N" 51.2 bushels

Cost of Phophorus (P_2O_5) -11.8¢ per lb.

Barley valued at $2.00 per bushel

P_2O_5	Cost	Yield bus per acre	Increased Yld. "P" yield - "N" yield	Profits from Phosphorus	Returns fe each dolla invested phosphoru
10	$ 1.18	55.6	4.4	$ 7.62	$ 7.46
15	$ 1.77	57.4	6.2	$ 10.63	$ 6.27
20	$ 2.36	58.7	7.5	$ 12.64	$ 4.41
25	$ 2.95	59.8	8.6	$ 14.25	$ 3.73
30	$ 3.54	60.4	9.2	$ 14.86	$ 2.03
45	$ 5.31	59.7	8.5	$ 11.69	$ -0.79
60	$ 7.08	58.2	7.0	$ 6.92	$ -1.69

Table 8 Response of Rapeseed to Phosphorus in Saskatchewan 1970 - 1972 (5 sites)

Check yield 8.6 Bushels

Yield with 90 lbs "N" 20.3 Bushels

Cost of Phosphorus (P_2O_5) -11.8¢ per lb.

Rapeseed Valued at $4.75 per bushel.

P_2O_5	Cost	Yield bus. per. acre	Increased Yld. "P" yield - "N" yield	Profits from Phosphorus	Returns for each dollar invested in Phosphorus
10	$ 1.18	23.0	2.7	$ 11.65	$ 10.87
15	$ 1.77	23.9	3.6	$ 15.33	$ 6.84
20	$ 2.36	24.5	4.2	$ 17.59	$ 4.83
25	$ 2.95	24.9	4.6	$ 18.90	$ 3.22
30	$ 3.54	25.1	4.8	$ 19.26	$ 1.85
45	$ 5.31	25.4	5.1	$ 18.92	$ 0.75
60	$ 7.08	25.3	5.0	$ 16.67	$- 0.16

Table 9

The Effect of Fertilizer Applications on Yield (lbs per Acre) of Alfalfa Forage at Arborfield, Saskatchewan in 1972 & 1973.

Treat. No.	lb per Acre N	P_2O_5	K_2O	S	Product Used lb. per Acre	Fert. Cost (1)	Appl'n Time	1973 June 26 Yield	Sept. 6 Yield	Total Yield	Incr/ck	Profit Due to Fert.(2)	1972 June 27 Yield	Aug. 29 Yield	Total Yield	Incr/ck	Profit Due to Fert.(2)	Total Profit 72 & 73
1	0	0	0	0	Check	0.00		2572	2671	5243	Check	0.00	4377	558	4935	Check	0.00	0.00
2	10	50	0	0	11-55-0 at 91	5.69	Fall	2780	3073	5853	610	4.99	4619	618	5237	302	-0.41	4.58
3	20	100	0	0	11-55-0 at 182	11.38	Fall	3500	2990	6490	1247	10.44	5202	659	5861	926	4.83	15.27
4	30	150	0	0	11-55-0 at 273	17.06	Fall/71	3332	3234	6566	1323	23.15	5422	828	6250	1315	5.95	29.10
5	40	50	0	35	16-20-0 at 250	11.00	Fall	3103	3121	6224	981	6.17	4576	569	5145	210	-7.33	-1.16
6	80	100	0	70	16-20-0 at 500	22.00	Fall	3479	3148	6627	1384	2.22	4497	616	5113	178	-18.89	-16.67
7	120	150	0	105	16-20-0 at 750	33.00	Fall/71	3876	3148	7024	1781	31.17	5385	937	6322	1387	-8.73	22.44
8	50	50	0	0	27-27-0 at 185	10.64	Fall	3324	3123	6447	1204	10.43	4749	595	5344	409	-3.48	6.95
9	100	100	0	0	27-27-0 at 370	21.28	Fall	3244	3186	6430	1187	0.51	5151	609	5760	825	-6.84	-6.33
10	150	150	0	0	27-27-0 at 556	31.97	Fall/71	3385	3163	6548	1305	22.84	4955	986	5941	1006	-14.37	8.47
11	100	50	0	0	26-13-0 at 385	17.90	Fall	3455	3167	6622	1379	6.23	4782	579	5361	426	-10.45	-4.22
12	200	100	0	0	26-13-0 at 769	35.76	Fall	3489	3371	6860	1617	-7.46	5034	718	5752	817	-21.46	-28.92
13	300	150	0	0	26-13-0 at 1154	53.66	Fall/71	3171	3047	6218	975	17.06	5677	980	6657	1722	-23.53	-6.47
14	17	50	50	6	8-24-24 at 208	10.61	Fall	3118	3067	6185	942	5.88	4675	605	5280	345	-4.57	1.31
15	33	100	100	13	8-24-24 at 417	21.27	Fall	3468	3190	6658	1415	3.49	5208	752	5960	1025	-3.33	0.16
16	50	150	150	19	8-24-24 at 625	31.88	Fall/71	3634	3216	6850	1607	28.12	5558	861	6419	1484	-5.91	22.21
17	50	50	50	20	15-15-15 at 333	17.82	Fall	3298	3085	6383	1140	2.13	4557	658	5215	280	-12.92	-10.79
18	100	100	100	40	15-15-15 at 667	35.68	Fall	3687	3168	6855	1612	-7.47	4950	662	5612	677	-23.83	-31.30
19	150	150	150	60	15-15-15 at 1000	53.50	Fall/71	3469	2987	6455	1212	21.21	5298	660	5958	1023	-35.60	-14.39
20	100	0	0	0	46-0-0 at 217	11.39	Fall	3011	3095	6106	863	3.71	4817	760	5577	642	-0.16	3.55
21	100	0	0	120	21-0-0 at 476	13.09	Fall	3242	2999	6241	998	4.38	5352	707	6059	1424	6.58	10.96
22	16	100	0	0	11-55-0 at 182	11.38	Spring	3633	3316	6949	1706	18.48	4801	620	5421	486	-2.68	15.80
23	80	100	0	70	16-20-0 at 500	22.00	Spring	3438	3242	6680	1437	3.15	4977	720	5697	762	-8.67	-5.52
24	100	100	0	0	27-27-0 at 370	21.28	Spring	3367	3272	6639	1396	3.15	5089	668	5757	822	-6.90	-3.75
25	200	100	0	0	26-13-0 at 769	35.76	Spring	3781	3178	6959	1716	-5.73	5156	697	5853	918	-19.70	-25.43
26	33	100	100	13	8-24-24 at 417	21.27	Spring	3545	3361	6906	1663	7.83	4909	634	5543	608	-10.63	-2.80
27	100	100	100	0	15-15-15 at 667	35.68	Spring	3540	3264	6804	1561	8.36	5163	670	5833	898	-19.97	-11.61
28	100	0	0	0	46-0-0 at 217	11.39	Spring	3095	2974	6069	826	3.07	4558	693	5251	316	-5.86	-2.79
29	100	0	0	120	21-0-0 at 476	13.09	Spring	3262	3150	6412	1169	7.37	4983	730	5713	778	0.53	7.90

(1) 11-55-0 at $125/ton; 16-20-0 at $88/ton; 27-27-0 at $115/ton; 26-13-0 at $93/ton; 8-24-24 at $102/ton; 15-15-15 at $107/ton; 46-0-0 at $105/ton; 21-0-0 at $55/ton.
(2) Hay valued at $35/ton.

Table 10

The Effect of Fertilizer Applications on Yield (lbs per Acre) of Alfalfa-Grass Forage at Mackwa, Saskatchewan in 1973

Treat. No.	lbs per Acre				Product Used lbs per acre	Fertilizer Cost (1)	Appl'n Time	27 June		5 Sept.		Total		Profit Due Fertilizer
	N	P_2O_5	K_2O	S				Yield	Incr/ck	Yield	Incr/ck	Yield	Incr/ck	
1	10	50	0	0	11-55-0 at 91	5.69	Fall	3193	441					
2	10	50	50	0	11-55-0 at 91 0-0-60 at 85	7.90	Fall	3219	467					
3	20	100	0	0	11-55-0 at 182	11.38	Fall	3407	655					
4	40	50	0	35	16-20-0 at 250	11.00	Fall	3460	708					
5	40	50	50	35	16-20-0 at 250 0-0-60 at 85	13.21	Fall	3977	1225					
6	80	100	0	70	16-20-0 at 500	22.00	Fall	3751	999					
7	0	0	0	0	Check			2557						
8	50	50	0	0	27-27-0 at 185	10.64	Spring	3817	1065	2079	-270	5896	795	1.29
9	100	100	0	0	27-27-0 at 370	21.28	Spring	4765	2013	2061	-288	6826	1725	4.60
10	50	25	0	0	26-13-0 at 193	8.97	Spring	4020	1268	2152	-197	6172	1071	7.10
11	100	50	0	0	26-13-0 at 385	17.90	Spring	4433	1681	2304	-45	6737	1636	[illegible]
12	50	0	0	0	46-0-0 at 108	5.67	Spring	3342	590	2353	4	5695	594	3.24
13	100	0	0	0	46-0-0 at 217	11.39	Spring	3551	799	2382	33	5933	832	1.09
14	50	0	0	60	21-0-0 at 238	6.55	Spring	3793	1041	2376	27	6169	1068	9.47
15	100	0	0	120	21-0-0 at 476	13.09	Spring	4666	1914	2811	462	7477	2376	22.55
16	10	50	0	0	11-55-0 at 91	5.69	Spring	3477	725	2358	9	5835	734	5.32
17	10	50	50	0	11-55-0 at 91 0-0-60 at 85	7.90	Spring	4108	1356	2515	166	6623	1522	14.93
18	40	50	0	35	16-20-0 at 250	11.00	Spring	4243	1491	2529	180	6772	1671	14.07
19	40	50	50	35	16-20-0 at 250 0-0-60 at 85	13.21	Spring	4523	1771	2755	406	7278	2177	19.45
20	0	0	0	0	Check			2948		2349		5297		
21	50	50	0	0	27-27-0 at 185	10.64	Spring	4309	1557	2510	161	6819	1718	15.13
22	50	25	0	0	26-13-0 at 193	8.97	Spring	4375	1623	2599	250	6974	1873	19.13
23	50	0	0	0	46-0-0 at 108	5.67	Spring	3241	489	2221	-128	5462	361	-0.26
24	50	0	0	60	21-0-0 at 238	6.55	Spring	4182	1430	2440	91	6622	1521	16.27

(1) 11-55-0 at $125/ton; 16-20-0 at $88/ton; 27-27-0 at $115/ton; 26-13-0 at $93/ton; 46-0-0 at $105/ton; 21-0-0 at $55/ton; 0-0-60 at $52/ton.
(2) Hay valued at $30/ton.